Oxford Cambridge and RSA Examinations

OCR

RECOGNISING ACHIEVEMENT

Computing – Student Guide for Advanced Subsidiary/Advanced GCE Specifications

The overall aim of these specifications is to encourage you to develop an understanding of the principles of problem solving using computers. Your studies will help you to understand the range of applications of computers and the effects of their use so that you can apply this understanding to develop computer-based solutions to problems. You will develop an understanding of systems analysis and design, and methods of implementation, testing and documentation.

Before you start this course

It would be helpful if you have studied either Computing or Information Technology, although this is not essential. It is probable that you will have achieved some success at GCSE or equivalent qualification level.

A qualification in Computing combines well with many subjects including any subjects that would benefit from a logical and systematic approach. It also complements subjects that contain analytical, scientific and technological aspects.

With a qualification in Computing you could go on to Higher Education or work in one of the many vocational areas servicing a world increasingly dominated by the use of computers.

This subject is made up of 6 modules of teaching and learning, which will be assessed in 6 units of assessment.

To get a certificate for Advanced Subsidiary GCE, you will need to have studied for and been assessed on your performance in 3 AS units.

To get a certificate for Advanced GCE, you will need to have studied for and been assessed on your performance in 3 AS units, **together with** 3 A2 units.

The modules you will study for AS are:

Module 2506: Introductory Computer Systems, Communications and Software

This is the foundation for all subsequent modules. It provides you with an understanding of the core aspects of computer systems, which is developed and enhanced in subsequent units.

Module 2507: Structured Practical Computing Tasks

This module provides you with opportunities to apply skills, knowledge and understanding from Modules 2506 and 2508 in a practical way. Work on the structured tasks will probably be carried out at the same time as your work on Module 2508, allowing you to apply the relevant theoretical material from Module 2508 to the appropriate exercise from Module 2507.

The structured tasks examine separately the different phases in the development of a computer-based system. Thus they will prepare you for the Computing Project, in the second half of the Advanced GCE, which requires the integration of these elements in response to an identified need. One or more tasks require the use of a computer system in their solution: in such cases, you may choose a solution based on the use of a programming language or an appropriate applications package.

Module 2508: Computer Systems Development and Practical Applications

This module provides you with opportunities to apply the skills, knowledge and understanding of computing concepts gained in Module 2506 to a range of applications in which computer systems are used.

These 3 modules of teaching and learning, assessed in their associated units of assessment, form the Advanced Subsidiary GCE qualification.

The modules you will study for A2:

Module 2509: Systems Software Mechanisms, Machine Architecture, Database Theory and Programming Paradigms

This module will extend your knowledge and understanding of concepts related to computer systems. Some concepts previously encountered in Modules 2506 and 2508 are developed in greater depth, while some new concepts are introduced. In addition, applications based on information provision are covered in this module.

Module 2510: Computing Project

In this module you will need to identify a well-defined user-driven problem, involving a third-party user, and to generate a solution. As for Module 2507, this is done using your choice of software tools and may include a programming language, an appropriate applications package or other software. Your work on the Project will begin in parallel with work on Module 2509.

Module 2511: Integrated Information Systems

This module applies and extends your knowledge of systems and data and the development, implementation, and management and applications of systems. The module covers the applications of real-time computing and simulation.

The assessment structure for Computing is:

Unit 2506: Introductory Computer Systems, Communications and Software

1½ hours examination: short answer questions.

+

Unit 2507: Structured Practical Computing Tasks

Board-set practical tasks.

+

Unit 2508: Computer Systems Development and Practical Applications

1½ hours examination: structured questions.

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+

Unit 2509: Systems Software Mechanisms, Machine Architecture, Database Theory and Programming Paradigms

1½ hours examination: structured questions.

+

Unit 2510: Computing Project

Extended practical work to solve a computing problem focused on end user requirements.

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Unit 2511: Integrated Information Systems

1½ hours examination: structured questions on short scenarios.

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